Abstract: The present invention concerns a method for the detection of methylated DNA against a background of unmethylated DNA. The double strands of the DNA to be investigated are separated and then reassociated with the formation of hemimethylated double strands. After this, the hemimethylated DNA is enzymatically converted into completely methylated DNA. The quantity of methylated DNA is thus increased. Then the methylated DNA can be analyzed by various methods. The method according to the invention is suitable particularly for the diagnosis and prognosis of cancer disorders and other diseases associated with a change in the methylation status as well as for predicting undesired drug effects.